

they develop early. Sometimes specimens are also found which are intermediate in appearance between these two mutations. This intermediate type, however, does not seem to be the result of a cross between individuals of the other two; experiments rather suggest that it is due to another dominant hereditary factor which tends to reduce the effect of the factor that retards the development of the bands, although only producing a noticeable difference in about 70 per cent of the shells. Further experiments, however, are needed for the elucidation of these problems.

3. "A note upon certain Fossils of the Upper Tertiary beds of the Dardanelles." By Paul Pallary.

Dr. Howell exhibited photographs from micro-slides of the radulæ of *Polita cellaria*, Müll., and *Limnæa palustris*, Müll., originally mounted in the year 1852 and remounted this year—1920.

Dr. Boycott exhibited a series of maps used by Mr. Roebuck in preparing the Census of Distribution of British Mollusca.

ORDINARY MEETING.

FRIDAY, 9TH APRIL, 1920.

J. R. LE B. TOMLIN, M.A., F.E.S., Vice-President, in the Chair.

Mr. G. C. Spence was elected to membership of the Society.

The following communications were read:—

1. "Further notes on Radulæ." By Dr. E. W. Howell, M.A.

In the Testacellidæ all our three species can be easily and definitely discriminated by means of the radula. The central tooth is smallest in *T. haliotidea*, Drap.

In the genus *Limax* (sensu lato) we have adult forms (*maximus*, *cinereo-niger*, and *flavus*), a peculiar form (*L. arborum*), and nepionic forms (*L. tenellus*, *Agriolimax agrestis*, and *A. lævis*). The points of distinction and relationship of these were described in more detail.

The two Milaces are very similar, but apparently separable. (Only thirteen specimens of *Milax gagates* had been examined, however, this total including no very large specimens.)

The reintroduction of the generic name *Zonites* was urged; it is noted that *Z. algirus* is an adult form, while our larger species are nepionic; *nitidulus*, however, is of the *algirus* type. The striking smallness of the central uncus in *lucidus*, *cellarius*, *rogersi*, and *alliarius* is explained by the folding of the radula and the increase in size of the pleural unci. It does not appear to be a character calling for the formation of a separate genus. *Z. scharffi* is considered as probably typical *cellarius*, *Z. hibernicus* as a local race of *cellarius*. The previously described distinctions are well maintained, but are considered to be of less than specific importance.

The unimportance of certain characters formerly relied upon for determination of species was pointed out. Such characters are : accessory cusps on any of the unci ; length of external cones ; length of base supporting uncus ; number of true externals ; elongation of radula.

In the above-mentioned species the radula is in each case characteristic ; though the determination is more difficult in the pairs of species *Limax maximus* and *L. cinereo-niger*, *Agriolimax agrestis* and *A. lævis*, *Milax sowerbyi* and *M. gagates*. In these cases, however, it is believed that the distinguishing characters given, derived from careful and continued examination of a large number of specimens, will hold good. But the point of view is adopted that the use of radula study is to establish relationship rather than distinctions.

The paper was illustrated by a series of eighty-eight photographs.

2. "On the Hectocotylus of *Todaropsis*." By R. Winkworth, F.R.G.S.

While in Plymouth last January the author was fortunate in procuring a male and female of *Todaropsis eblanæ*, Ball, the "Newfoundland sleeve" of Channel fishermen. Since no hectocotylus of the Oigopsida has previously been noted in English works, it is worth recording that the fourth right arm is modified throughout its whole length, the suckers being replaced by papillæ, which are large and alternate on the basal part and form a linear series along the distal two-thirds of the arm. The fourth left arm is also modified, but for the proximal third only. Drawings and specimen were exhibited.

3. "Concerning *Edentellina*." By Chas. Hedley, F.L.S.

On the motion of Mr. Kennard, seconded by Mr. Tomlin, a unanimous vote of congratulation to Mr. R. Bullen Newton (who is retiring from the staff of the British Museum) on his completion of fifty-two years' association with geological science was passed.

An obituary notice of the late R. Etheridge, jun., was read by Mr. R. Bullen Newton. The announcement of Mr. Etheridge's death was received with regret by the Society.

ORDINARY MEETING.

FRIDAY, 14TH MAY, 1920.

G. K. GUDE, F.Z.S., President, in the Chair.

The following communications were read :—

1. "Nomenclatorial Notes relating to British Non-Marine Mollusca." By A. S. Kennard, F.G.S., and B. B. Woodward, F.L.S., etc.

2. "New Mollusca from Port Alfred." By G. B. Sowerby, F.L.S.

3. "On the Anatomy of two species of *Helicarion* from Tropical Africa." By Hugh Watson, M.A.